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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,979	02/10/2004	Linfang Zhu	226083	1294

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EXAMINER

FAISON, VERONICA F

ART UNIT PAPER NUMBER

1755

DATE MAILED: 10/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/775,979

Applicant(s)

ZHU ET AL.

Examiner

Veronica F. Faison

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 August 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 7-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4, 7, 8, 10, 12, 13, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Bhatia et al (US Patent 4,567,213).

Bhatia et al teach an ink composition comprising a resin component i.e. styrene-acrylic acid binder, a soluble dye, a solvent system that may include lower aliphatic ketone and an evaporation retardant (abstract and col. 1 lines 29-51). The composition may also comprise modifiers such as rosin oil or rosin esters in the amount of 0 to 15 percent by weight (col. 3 lines 6-11). The ketone is present in the amount of 10 to 60 percent by weight and may be acetone or methyl ethyl ketone (col. 3 lines 21-30). The evaporation retardant is present in the amount up to 50 percent by weight (col. 3 lines 57-59). The ink has properties of the following viscosity in the range of 1 to 10 cp, resistivity in the range of 10 to 3000 ohm-cm and sonic velocity of 1100 to 1400 m/sec (col. 4 lines 12-20). The composition as taught by Bhatia et al appears to anticipate the claimed invention.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 4, 10, 12, 15-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Airey et al (US Patent 5,407,474).

Airey et al teach an pigmented ink composition that may be used in ink jet printing having properties including the viscosity in the range 1 to 100 mPas, conductivity in the range 150 to 16000  $\mu\text{mhos/cm}$ , and a surface tension of 20 to 70 dynes/cm (abstract and col. 2 lines 21-42). The reference teaches that the medium for the composition is a polar solvent that may be water, methyl ethyl ketone, alcohol or a mixture thereof (col. 3 lines 13-15) in an amount greater than 15 percent by weight. The binder may comprise on or more resins such as rosins, esterified resins, acrylic, and styrene acrylic (col. 3 lines 38-41). The composition may comprise additional components including surfactants, humectants, biocides, defoaming agents, penetrants and buffering agents (col. 4 lines 30-55).

Airey et al fails to specifically exemplify the use of methyl ethyl ketone and the specific resins as claimed by applicant. Therefore, it would have been obvious to one of ordinary skill in the art to use the methyl ethyl ketone and the specific resins as claimed by applicant as Airey et al also discloses the use of methyl ethyl ketone and the specific resins but shows no example incorporating them.

Claims 1-3, 7, 10, 11, 12, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 05-098203.

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JP 05-098203 teaches an ink composition comprising an oil color, resin and an organic solvent (claim 1 and para. 0003). The reference further teaches that the resin may be a combination of epoxy resin, acrylic resin, silicone resin, phenol resin, salt vinyl acetate system resin, and rosin ester (para. 0011). The colorant present in the composition may be a dye in the amount of 1 to 15 percent by weight (para. 0012). The solvent present may be selected from ketones such as methyl ethyl ketone and acetone (0013).

JP 05-098203 fails to specifically exemplify the use of methyl ethyl ketone and the specific resins as claimed by applicant. Therefore, it would have been obvious to one of ordinary skill in the art to use the methyl ethyl ketone and the specific resins as claimed by applicant as JP 05-098203 also discloses the use of methyl ethyl ketone and the specific resins but shows no example incorporating them.

Claims 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhatia et al (US Patent 4,567,213).

Bhatia et al is described above, but fails to teach the substrate set forth in claims 23-27.

Therefore it would have been obvious to one of ordinary skill in the art to use the ink composition taught by Bhatia et al because Bhatia teaches printing on substrate that are not paper.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-4 and 7-27 have been considered but are moot in view of the new ground(s) of rejection.

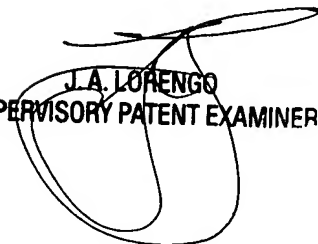
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Veronica F. Faison whose telephone number is 571-272-1366. The examiner can normally be reached on Monday-Thursday and alternate Fridays 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VFF  
10-1-05

  
J.A. LORENGO  
SUPERVISORY PATENT EXAMINER